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Part III

# Department of Transportation

## Federal Aviation Administration

## Light Transport Airplane Airworthiness Review Program

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 23, 25, and 135

[Docket No. 18600; Notice 78-17E]

## Light Transport Airplane Airworthiness Review Program

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice announcing termination of review.

**SUMMARY:** This notice announces termination of the Light Transport Airplane Airworthiness Review Program which was initiated to develop new airworthiness standards for multiengine airplanes having a maximum seating configuration, excluding any pilot seat, of 60 seats and a maximum takeoff weight of 50,000 pounds. Based on the information currently available to the FAA, the benefits expected to result from a new light transport airplane airworthiness regulation would not be realized. The technical information developed thus far during this effort can best be considered as a basis for improving Parts 23 and 25.

**FOR FURTHER INFORMATION CONTACT:** Everett W. Pittman, Regulatory Review Branch (AVS-22), Safety Regulations Staff, Associate Administrator for Aviation Standards, Federal Aviation Admistration, 800 Independence Avenue, SW., Washington, D.C. 20591; Telephone: (202) 755-8714.

**SUPPLEMENTARY INFORMATION:**

### Background

Current airworthiness standards exist for two basic designations of airplanes: Part 23 for airplanes 12,500 pounds or under having nine or less passenger seats, and Part 25 for transport category airplanes. Commuter airline and air taxi operations in the United States have grown substantially in recent years, establishing a need for new airplanes in the 10- to 60-seat transport category.

### Three Phase Program

Recognizing the need for improved standards for airplanes intended for these operations, the Administrator initiated a three-phase program. The first phase was the issuance of revised Part 135, "Air Taxi Operators and Commercial Operators," on September 26, 1978 (43 FR 46742; October 10, 1978). This action aligned the rules for these operations more closely with those of Part 121, "Certification and Operations: Domestic, Flag, and Supplemental Air Carriers and Commercial Operators of Large Aircraft." The second phase was the issuance of SFAR 41, "Airworthiness Standards: Reciprocating and Turbopropeller Powered Multiengine Airplanes," on September 7, 1979 (44 FR 53723; September 17, 1979). SFAR 41 prescribes requirements for an increase in approved takeoff weights for small airplanes. The third phase was the Light Transport Airplane Airworthiness Review. This Review contemplated the development of a new Part 24 of the Federal Aviation Regulations. The proposed part would provide a separate set of airworthiness standards for multiengine airplanes that would have a suggested maximum passenger seating configuration, excluding any pilot seat, of about 30 seats and a maximum gross weight of about 35,000 pounds. (These figures were later revised to 60 seats and 50,000 pounds.)

Generally, Part 24 was designed to tailor a set of regulations to this emerging class of airplane. Thus, it was the FAA's intent to craft a less complex set of design standards to provide a level of safety essentially equivalent to current design standards at a lower design and production cost. Everyone involved anticipated that the Part 24 regulations would help stimulate production of airplanes specifically aimed at providing the public the most suitable commuter airplane.

### Notice of Review Program

On December 21, 1978, the FAA issued Notice 78-17 (43 FR 60846; December 28, 1978) announcing the Light Transport Airplane Airworthiness Review Program. The proposed Part 24 airworthiness standards were not necessarily meant to be made up of existing Part 23 or Part 25 rules. However, those rules plus appropriate portions of Appendix A to Part 135 were to serve as the foundation for the proposed Part 24 requirements, with appropriate modifications as suggested by interested persons. On January 30, 1979, the FAA issued Notice 78-17A (44 FR 7057; February 5, 1979) announcing the date for a Discussion Forum on the FAA proposals and presenting a Forum schedule. On March 12, 1979, the FAA issued Notice 78-17B (44 FR 16856; March 19, 1979) inviting interested persons to submit comments and proposals for consideration at a Review Conference to be held in September 1979.

### Economic Analysis

The President's policy on improving government regulations, as provided in Executive Order 12044, requires agencies to consider alternative ways to deal with a problem and an analysis of the economic consequences of each alternative. Equally significant, the FAA was cognizant that unless specifically tailored regulations resulted in an economically feasible aircraft, the entire effort would be for naught. Thus, Notice 78-17B requested that each FAA proposal and each proposal submitted by interested persons be assessed by the public for its economic impact. This assessment was to include a comparison of the costs associated with Part 23 as modified by Appendix A to Part 135, and Part 25. The FAA requested that these costs be identified by such categories as design, testing, production, operating, etc. Where appropriate, the costs were to be further identified as initial (one-time), recurring, and revenue gain or loss.

Very little useful economic data was presented in response to this request and what was presented was of limited value because it only compared selected sections of Part 23 with Part 24 or Part 24 with Part 25. To assist the FAA in preparing a meaningful economic analysis on the data submitted, an analysis was conducted involving a knowledgeable panel from outside the agency. Major domestic and Canadian manufacturers of aircraft were contacted to obtain information on the cost impacts of proposed Part 24.

Again, the information available from industry was not sufficient to prepare cost estimates. Therefore, a panel knowledgeable in aircraft design and manufacture was assembled to provide engineering estimates of the likely cost impacts of proposed Part 24. The panel developed a general specification for a 30-seat airplane which could be certified to either Part 24 or Part 25. An estimate of the cost to certify the same base airplane to Part 23 as modified by Appendix A to Part 135 was also prepared to establish a cost for such an airplane if it could be so certificated.

### Results to Date of the Part 24 Analysis

The Light Transport Airplane Airworthiness Review has benefitted from the participation of the most highly qualified technical expertise from the aviation industry, from foreign civil aviation authorities and from within the FAA. The resulting data represents the most indepth and productive review of the United States fixed-wing airworthiness standards ever accomplished.

The FAA has given considerable thought to all of the arguments advanced thus far regarding Part 24. Overall, the FAA has concluded that many of the same basic results that would have been achieved through a Part 24 can be realized at a lower cost to

the public by making some related changes to Part 25.

To illustrate the efficiency of amending Part 25 rather than to establish a new Part 24, let us focus on the fact that a baseline airplane specification was developed for comparison purposes which could be certificated to Part 23 plus Appendix A to Part 135, to Part 24, and to Part 25. It was a twin-engine turbopropeller airplane with 30 seats, a design cruise speed of 300 MPH, and a gross takeoff weight of 27,000 pounds. The baseline airplane certificated to Part 23 plus Appendix A to Part 135 was estimated to cost $2,500,000 for a production run of 200 airplanes. The same airplane certificated to Part 24 was estimated to cost $2,673,357, and to Part 25 was $2,810,740. Thus the cost differential in airplane unit cost for a production run of 200 airplanes for Part 23 versus Part 25 is only a little over 12 percent. Likewise, the cost saving for a Part 24 airplane compared to Part 25 is only 5 percent. In short, the economic benefits expected to result from a new light transport airplane airworthiness regulation apparently would not be realized. Consequently, the technical information developed during the course of the Part 24 study effort can best be considered as a basis for improving Parts 23 and 25.

A copy of the complete economic analysis and the latest technical draft of Part 24 used to estimate the cost of certificating an airplane under this proposed part are contained in Docket No. 18600 and can be reviewed in Room 916, 800 Independence Avenue, S.W., Washington, D.C. between 8:30 a.m. and 5:00 p.m.

**Alternative Action**

The content of the technical draft of Part 24 which existed at the time of this decision will be published and will be made available to interested persons upon request. Additionally, the FAA will propose separate rulemaking action which would revise Part 25, taking advantage of the technical knowledge gained in the Light Transport Airplane Airworthiness Review Program. For example, several of the landing gear design and test requirements in Part 25 could be relaxed for airplanes of less than 35,000 pounds with less complex gear designs. Likewise, the aisle width requirements in Part 25 which are appropriate to wide-body airplanes could be relaxed for the smaller airplanes of less than 30 passengers. Thus, proposed changes would provide varying requirements and methods of compliance based on size, complexity, and sophistication of the proposed airplane. These varying requirements and methods of compliance would not degrade the level of safety envisaged by Part 25, but would recognize other avenues of compliance for less complex, smaller transport category airplanes. A less complex small turbopropeller powered transport with dual wheel landing gear, for instance, could achieve the desired level of safety with different specific requirements than is necessary for a typical wide-body transport. Such an amendment to Part 25 could also more appropriately cover the more complex multiengine general aviation airplanes currently certificated under Part 23. This would permit the FAA to also consider revising the applicability requirements of Part 23, seeking more rational criteria for certification of less complex, smaller general aviation airplanes.

**Termination**

In accordance with the reasons discussed in this notice, the Light Transport Airplane Airworthiness Review Program is hereby terminated.

(Secs. 313(a), 601 and 603, Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, and 1423), Sec. 6(c), Department of Transportation Act (49 U.S.C. 16555(c)))

Issued in Washington, D.C., on December 19, 1980.

**Langhorne Bond,**

*Administrator.*

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